I. AMENDMENT

Listing of the Claims

The following listing of the claims replaces all previous listings or versions of the claims:

1-18. (Canceled)

19. (Previously Presented) A method of detecting cellular expression of a recombinant somatostatin receptor (SSTR) in a subject comprising:

a) introducing a nucleic acid encoding a recombinant somatostatin receptor (SSTR) into a cell of the subject; and

b) detecting cellular expression of a recombinant SSTR based upon the chemical, physical or biological properties of said recombinant SSTR;

wherein the expression of said recombinant SSTR is detected by contacting said cell with a ligand that binds with specificity to said recombinant SSTR.

20. (Previously Presented) The method of claim 19, wherein said ligand is radioactively labeled somatostatin analog.

21. (Previously Presented) The method of claim 20, wherein said ligand is radioactively labeled octreotide.

22. (Previously Presented) The method of claim 19, wherein the expression of said recombinant SSTR is detected by contacting the cell with an antibody, antibody fragment, or small molecule that binds with specificity to said recombinant SSTR.

23. (Previously Presented) The method of claim 38, wherein said antibody, antibody fragment, or small molecule binds with specificity to said protein tag.

24. (Previously Presented) The method of claim 39, wherein the expression of said recombinant SSTR is detected by enzymatic activity of said protein tag.

25. (Original) The method of claim 24, wherein said enzymatic activity is chloramphenicol acetyl transferase activity.

26-37. (Canceled)

38. (Previously Presented) The method of claim 22, wherein said recombinant SSTR further comprises a protein tag fused to the N-terminal end or C-terminal end of said recombinant SSTR.

39. (Previously Presented) The method of claim 38, wherein said protein tag has enzymatic activity.

40. (Currently Amended) The method of claim 38, wherein the protein tag is selected from the group consisting of hemagglutinin A, beta-galactosidase, thymidine kinase, transferrin, myc-tag, VP16, $(His)_6$-tag, [[or]] and chloramphenicol acetyl transferase.

41. (Previously Presented) The method of claim 19, wherein said ligand has been detectably labeled.

42. (Canceled)

43. (Previously Presented) The method of claim 19, wherein the recombinant SSTR comprises a carboxy terminal truncation of said recombinant SSTR, wherein said carboxy terminal truncation alters internalization and/or signaling of said recombinant SSTR into a cell.

44. (Previously Presented) The method of claim 19, wherein the recombinant SSTR is a recombinant SSTR type 2 receptor.

45. (Previously Presented) The method of claim 44, wherein the recombinant SSTR further comprises a protein tag fused to the N-terminal end or C-terminal end of said recombinant SSTR.

46. (Currently Amended) The method of claim 45, wherein the protein tag is selected from the group consisting of hemagglutinin A, beta-galactosidase, thymidine kinase, transferrin, myc-tag, VP16, $(His)_6$-tag, [[or]] and chloramphenicol acetyl transferase.

47. (Previously Presented) The method of claim 45, further comprising detecting the protein tag.

48. (Previously Presented) The method of claim 19, wherein the nucleic acid is comprised in an expression vector.

49. (Previously Presented) The method of claim 48, wherein the vector a nucleic acid, a plasmid, a viral particle, a virus, or a prokaryotic or eukaryotic cell.

50. (Previously Presented) The method of claim 49, wherein a virus is an adenovirus, baculovirus, parvovirus, herpesvirus, poxvirus, adeno-associated virus, semiliki forest virus, vaccinia virus, Sindbis virus, lentivirus, or retrovirus.

51. (Previously Presented) The method of claim 50, wherein the virus is an adenovirus.

52. (Previously Presented) The method of claim 19, wherein the nucleic acid encoding the recombinant SSTR is operatively linked to an inducible, a repressible, or a constitutive promoter.

53. (Previously Presented) The method of claim 52, wherein the promoter is a constitutively active promoter.

54. (Previously Presented) The method of claim 19, wherein the nucleic acid encodes a recombinant SSTR, wherein said recombinant SSTR comprises a carboxy terminal truncation of said recombinant SSTR, wherein said carboxy terminal truncation alters internalization and/or signaling of said recombinant into a cell, and wherein said recombinant SSTR further comprises a heterologous leader sequence at the N-terminus or C-terminus of said recombinant SSTR.

55. (Previously Presented) A method of detecting a recombinant SSTR receptor in a cell comprising:

a) introducing the cell to a nucleic acid encoding a recombinant SSTR amino acid sequence, wherein the encoded recombinant SSTR amino acid sequence comprises a carboxy terminal truncation or N-terminal truncation, and

b) detecting cellular expression of said recombinant SSTR amino acid sequence using a ligand that binds with specificity to the recombinant SSTR amino acid sequence.

56. (Previously Presented) The method of claim 55, wherein said ligand has been detectably labeled.

57. (Previously Presented) The method of claim 55, wherein the recombinant SSTR further comprises a protein tag fused to the N-terminal end or C-terminal end of said recombinant SSTR.

58. (Previously Presented) The method of claim 57, wherein the protein tag is hemagglutinin A, beta-galgactosidase, thymidine kinase, transferrin, myc-tag, VP16, (His)6-tag, or chloramphenicol acetyl transferase.

59. (Previously Presented) The method of claim 55, wherein the nucleic acid encoding the recombinant SSTR amino acid sequence further comprises a leader sequence to guide the recombinant SSTR sequence to a particular subcellular location.

60. (Previously Presented) The method of claim 59, wherein the leader sequence is a heterologous leader sequence.

61. (Previously Presented) The method of claim 60, wherein the leader sequence is an Ig kappa leader sequence.

62. (Previously Presented) The method of claim 55, wherein the nucleic acid encodes a recombinant SSTR type 2 receptor.

63. (Previously Presented) The method of claim 55, wherein the nucleic acid encoding the recombinant SSTR further comprises a leader sequence to guide the recombinant SSTR to a particular subcellular location.

64. (Previously Presented) The method of claim 55, wherein the carboxy terminal truncation comprises a carboxy terminal truncation from amino acid 315.

65. (Previously Presented) The method of claim 55, wherein detection comprises detection using MRI, CT, ultrasound, planar gamma camera imaging, SPECT, PET, imaging using visible light, imaging using luciferase, imaging using a fluorophore, imaging using near infrared light, or imaging using infrared light.

66-77. (Canceled)

78. (Previously Presented) The method of claim 19, wherein said ligand is further defined as a ligand capable of being labeled with a substance that can be imaged.

79. (Previously Presented) The method of claim 55, wherein the encoded recombinant SSTR amino acid sequence comprises a carboxy terminal truncation.

80. (Previously Presented) The method of claim 79, wherein the carboxy terminal truncation is further defined as a truncation that alters internalization and/or signaling of the recombinant SSTR amino acid sequence.

81. (Previously Presented) The method of claim 79, wherein the nucleic acid encodes a recombinant somatostatin type 2A (SSTR2A) receptor amino acid sequence, and wherein the amino acids that are C-terminal to amino acid 314 of the SSTR2A protein are deleted.

82. (Previously Presented) The method of claim 81, wherein the encoded SSTR2A amino acid sequence further comprises a protein tag fused to the N-terminus or C-terminus of said SSTR2A amino acid sequence.

83. (Previously Presented) The method of claim 81, wherein the encoded SSTR2A amino acid sequence further comprises a heterologous leader sequence fused to the N-terminus or C-terminus of said SSTR2A amino acid sequence.

84. (Previously Presented) The method of claim 80, wherein detection comprises detection using MRI, CT, ultrasound, planar gamma camera imaging, SPECT, PET, imaging using visible light, imaging using luciferase, imaging using a fluorophore, imaging using near infrared light, or imaging using infrared light.

85. (Previously Presented) The method of claim 53, wherein the promoter is a thymidine kinase promoter, a SV40 promoter, or a CMV promoter.